

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002701**Date Inspected:** 12-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1500**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Luan zhoa Gang (07120761)**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Side Plates, Bottom Plates and Deck Sections**Summary of Items Observed:**

The Quality Assurance (QA) Inspector,Mahlon Lindenmuth,arrived on site at the Zhenhua Port Machinery Company facility on Changxing island, China to periodically monitor welding and Quality Control functions. While on site the Quality Assurance Inspector observed and/or discovered the following:

QA Inspector, Lindenmuth, observed the work being performed in Bay 2 of the New OBG. ZPMC personnel were performing various functions related to the fabrication of the OBG Side Plates and Bottom Plates as well as the deck sections in the jig fixture. The fabrication observed included but was not limited to the preparation of areas where temporary welds for strongbacks are located, bevel preparation and welding of the Complete Joint Penetration welds (CJP)on Side Plates and Bottom Plates,heat straightening of Side Plates and Bottom Plates.

Member identification and the work performed on the members is as follows:

SEG017A-003: Heat straightening of the member was performed by placing(4)four ton weights on the two CJP weld splices joining the side panel sections. The heat straightening was performed using an approved procedure and was monitored by ZPMC Quality Control personnel.

**OBG Jig Fixture (South):**

Segment 3BE (SEG16): Caltrans QA observed ZPMC personnel erecting the floor beam cross bracing section identified as FB-002-02 Panel Point(PP) 23. The section has been tack welded to segment 3BE-D6. However, it should be noted that during the installation of the section ZPMC personnel flame cut the North and South ends of the flange on FL2-2. The flange ends had been removed so segment would fit between FL1-1 North and FL1-1

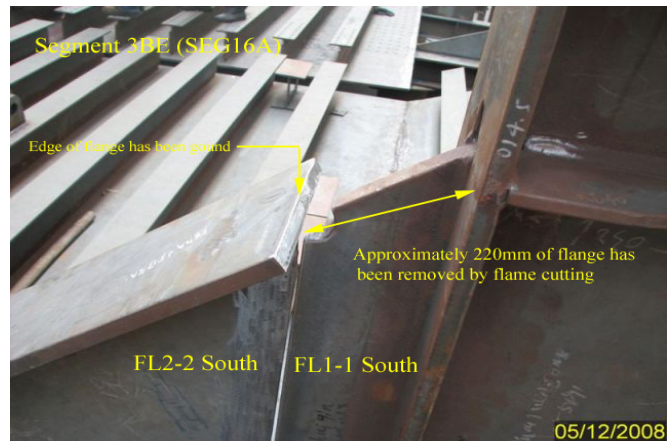
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South. The sections of the flange lengths that have been removed measure at approximately 180mm on the North end and 225mm on the South end. See attached photos.

Caltrans QA also observed ZPMC personnel performing weld repairs on the Complete Joint Penetration (CJP) welds joining 3BE-E7 to 3BE-D6 and 3BE-D6 to 3BE-C5. Repairs are being made after ZPMC Quality Control (QC) personnel performed Ultrasonic Testing (UT) of the joint and noted discontinuities in the weld. The repairs are a first time repair on the joint. The repairs are accessed from the underside of the joint (root side). Prior to repair welding ZPMC QC personnel performed Magnetic Particle Testing (MT) of the excavated areas of the joint and noted the areas as acceptable. The welding variables and welder Identification numbers are noted below.

Caltrans QA noted that approximately 2800mm of weld joint could not be accessed due to the fact that the jig fixtures lateral bottom beam supports create an obstruction. Caltrans QA could not determine if weld repairs are necessary in the inaccessible areas due to ZPMC QC inadequately marking the areas of UT indications on the weld face.



Item	Weld Identification	Applicable WPS	CWI Name	Amperage	Voltage	TravelSpeed	Preheat Temp	Remarks
1	Segment 3BE-D6 to 3BE-E7	WPS-345-SMAW-401	Chen Gang	138-156	23-24	235mmpm	68 C	Welders ID: 044772, 208114, 066458

## Summary of Conversations:

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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**Inspected By:** Lindenmuth,Mahlon

Quality Assurance Inspector

**Reviewed By:** Cuellar,Robert

QA Reviewer